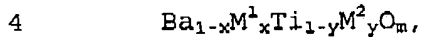


What is claimed is:

1 1. A dielectric material composition with high
2 dielectric constant and low dielectric loss, comprising a
3 metal oxide having a formula of:



5 wherein

6 M^1 is a metal selected from the group consisting of the
7 elements of Group IA and IIA of the period table,
8 lanthanide series, Zn, Bi, and Sn;

9 M^2 is a metal selected from the group consisting of Ta,
10 Zr, Ce, Nb, Co, and Hf;

11 x is a number of 0 to 1;

12 y is a number of 0 to 1; and

13 m satisfies the principle of electrical neutrality for
14 the metal oxide.

1 2. The composition as claimed in claim 1, wherein M^1 is
2 Mg, La, or Sr.

1 3. The composition as claimed in claim 2, wherein M^1 is
2 Sr or La.

1 4. The composition as claimed in claim 1, wherein M^2 is
2 Ta, Zr, or Hf.

1 5. The composition as claimed in claim 4, wherein M^2 is
2 Ta.

1 6. The composition as claimed in claim 4, wherein M^2 is
2 Zr.

1 7. The composition as claimed in claim 4, wherein M^2 is
2 Hf.

1 8. The composition as claimed in claim 1, wherein x is a
2 number of 0 to 0.5.

1 9. The composition as claimed in claim 1, wherein y is a
2 number of 0 to 0.5.

1 10. The composition as claimed in claim 1, wherein the
2 metal oxide is $(Ba_{1-x}Sr_x)(Ti_{1-y}Ta_y)O_3$, $0.3 \leq x \leq 0.5$, and $0 \leq y$
3 ≤ 0.3 .

1 11. The composition as claimed in claim 1, wherein the
2 metal oxide is $(Ba_{1-x}La_x)(Ti_{1-y}Hf_y)O_3$, $0 \leq x \leq 0.5$, and $0 \leq y \leq$
3 0.5 .

1 12. The composition as claimed in claim 1, wherein the
2 metal oxide is $(Ba_{1-x}La_x)(Ti_{1-y}Zr_y)O_3$, $0 \leq x \leq 0.5$, and $0 \leq y \leq$
3 0.5 .

1 13. The composition as claimed in claim 1, wherein the
2 dielectric material composition with high dielectric constant
3 and low dielectric loss is manufactured from a method of
4 solid state reaction.

1 14. The composition as claimed in claim 1, wherein the
2 dielectric material composition with high dielectric constant
3 and low dielectric loss is manufactured from a method of
4 liquid phase reaction.

1 15. The composition as claimed in claim 1, wherein the
2 dielectric material composition with high dielectric constant
3 and low dielectric loss is in a bulk form.

1 16. The composition as claimed in claim 1, wherein the
2 dielectric material composition with high dielectric constant
3 and low dielectric loss is in a film form.

1 17. The composition as claimed in claim 1, wherein the
2 dielectric constant of the dielectric material composition is
3 more than 320 and the dielectric loss is less than 0.01.

1 18. The composition as claimed in claim 17, wherein the
2 dielectric constant of the dielectric material composition is
3 more than 950 and the dielectric loss is less than 0.001.